

New Jersey Fire Inspector Certification Program

**New Jersey
Uniform
Fire Code**

**Fire
Inspector
Training
Program**

Based on the ICC-IFC-
2015 Edition with NJ
adopted changes

Fire Inspector Certification Program

New Jersey Uniform Fire Code Inspector Training Program

Module 1 Introduction to Fire Code Enforcement

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Syllabus Review

- Review dates and times of classes
- Review topics
- References
- Course Objectives

- State Certification Course
- Course Objectives
- Course Materials
- UFC-NJ Order forms
- Assembling Code book
- Course Conduct
- Parameters for Course
- Homework
- Test Quiz's, Examinations
- Completion of NJ Fire Inspector Certification Examination

State Certification Course **OVERVIEW**

- **Class Hours**
90 contact hours (required) (not including exam)
- **Certification Course**
 - ☐ 19 modules (Module 20 is additional information.)
 - ☐ Each module is 3 to 9 hours in length
 - ☐ Presented in 3 hour blocks
 - ☐ Lecture & practical exercises included
- Open book written exam at end of course.
 - ☐ You must attend all modules to qualify
 - ☐ Completion of NJ-DFC written examination

State Certification

Successful completion of this program entitles you to apply to take the NJ DFS Fire Inspector Certification Exam at a specified testing facility.

<http://www.state.nj.us/dca/divisions/dfs/offices/training.html>

Passing that State exam entitles you to **apply** to the State Division of Fire Safety for certification as a Fire Prevention Inspector within 3 years.

Course Objective

The design of this course is to provide

– Fire service personnel (Volunteers and Career)

– Non fire service personnel

with an understanding of fire prevention, fire code enforcement and EDUCATION.

Course Objectives

II. Specific Objective:

The student will be able orally, in writing, or in practice to:

- State the basic theory of fire prevention and code enforcement.
- Trace briefly, the history of fire prevention and code enforcement.
- Specify the major types of building construction and use groups classification with special reference to the N.J. Uniform Construction Code
- Identify the fire hazards common to all and unique to each type of facility.

II. Specific Objective:

- List the functions of various life safety systems of buildings including but not limited to, means of egress, suppression systems, fire detection and alerting devices.
- Recognize whether or not life safety systems of buildings are properly installed, regularly tested, and adequately maintained.
- Specify and apply inspection procedures germane to special occupancy buildings including, but not necessarily limited to , schools, multiple dwelling units, hotels, boarding houses, nursing homes and places of assembly

II. Specific Objective:

- Have technical competency in the subject areas specified in the N.J. Administrative Code N.J.A.C. 5:71
- Have knowledge to enforce the N.J. Uniform Fire Safety Code at the local level.
- Have administrative skills to enforce the N.J. Uniform Fire Code at the local level.
- Complete requirements specified by N.J. Dept. of Community Affairs (DCA) for certification as a fire inspector pursuant to the Uniform Fire Safety Act.

II. Specific Objective:

- List the types of building, facilities, and uses subject to the N.J. Fire Safety "Retrofit Code"
- Apply the procedures for the safe use and maintenance of facilities, building, and uses subject to the N.J. Uniform Fire Code.
- Recognize materials which pose special fire hazards including, but not necessarily limited to, cellulose nitrate products, compressed gases, explosives and fireworks, flammable liquids and radioactive materials.
- Recognize where fire safety permits for storage and use of specific materials and activities are required.
- Apply the procedure for safe handling of high hazard materials

Course Materials

- **Course syllabus (provided)**
- **Course schedule**
- **N.J. Uniform Fire Code (UFC-NJ)**
 - Regulations and Technical sections
- **International Fire Code 2015 edition with NJ adopted changes.**
- **N.J. Uniform Construction Code (UCC)**
 - Selected Sections (provided)
- **IFSTA Fire Inspection Guide 8th ed.**
 - Student Manual (provided)

Completion of a Hazardous Materials Awareness course and
– FEMA ICS 100 & 700 certification.

UFC Order Forms

For those students needing UFC

- Handout order form
- Review filling out of order form
- Explain method of payment
- Students placing orders are to return the form with payment made out to 'Treasurer, State of NJ' at the next class.

Assembling the UFC

As a group the students who receive their new copy of the Uniform Fire Code of NJ ('Red Book') will assemble them class 2.

Those students already possessing copies can assist the students assembling the new books and make sure yours is assembled correctly and is up to date.

Fire Code Enforcement

- **Is one of the most technical classes within the fire service.**
- **Is one of the most challenging**
- **Will test your**
 - **Patience**
 - **Endurance**
 - **Ability**
 - You will need to read, write, discuss, observe, accept new concepts, understand.

Fire Code Enforcement

- This class is conducted like the real world.
- It will involve the use of all resources you have :
 - People, reference books, computers software **you name it, you can bring it in and use.**

Fire Code Enforcement

- Home Work
- Class Work
- Ride-a-long program
- Research Paper

PARAMETERS FOR COURSE COMPLETION

- Attendance - **100%**
- Class participation (being involved)
- Quiz (s) - **100% submission**
- Worksheets - **100% submission**
- Class Paper/Research Project - **100%**
- Final Examination (there are 2)

PARAMETERS FOR COURSE COMPLETION

- **Final Examination Course**
 - **70% is Passing (determined by AHU)**
 - At conclusion of class
 - **Is Open Book** Including all notes everything you have you may use.
- **Final Examination State**
 - See description in student manual. This is a Kean Administered exam

Test-Quiz-Exam's

- All WORKSHEETS / QUIZ'S / EXAM's will be take-home and open book. (Notes may be used)
- Worksheets / Quizzes / Preplans-will be take home.
- All assignments are listed in student manual for each Module

References

- NFPA Codes & Standards
- NFPA Fire Protection Handbook 18th edition or newer
- NFPA Standard 1031, Fire prevention Inspector
- IFSTA Essentials 8th edition
- Jones and Bartlett Firefighter's Handbook NJ edition
- Internet, Newspaper, Periodicals etc.

Reference Availability

- The references listed for this class may be available from:
 - College campus or fire academy library
 - NJ State Library
 - Fire station library
 - National Fire Academy Learning resource Center (NLRC)
 - On-line as noted on next slide

On Line (<http://www.>)

- <http://www.>
- IAFC.org
 - IAAI.ORG
 - State.nj.us
 - FEMA.gov
 - EPA.gov
 - phmsa.dot.gov/hazmat
 - OSHA.gov
 - NFPA.org
 - NIST.gov
 - ICCSAFE.org
 - FM.org
 - CR.com
 - UL.org

Technical Components

- **Field Trip(s) (ride-a-long program)**
- **Slide specific presentations**
- **Shared experience (war stories)**
- **Practical exercises**
- **Research studies**
- **Lecture and Demonstrations**

History of Fire Prevention

History of Fire Prevention

Fire became available to us in prehistoric times

- We depend on it for:

- Fuel
- Warmth
- Cooking

And we have struggled to control it since the beginning...

Ancient Rome

Fire Prevention dates back to 300 B.C.

- Slaves called *Familia Publica*
 - Duty to 'watch' for fire
 - Watched from atop walls of the city
 - 'fire watch' continued until 14 A.D.



Caesar Augustus

First known fire department

- 27 B.C. to 14 A.D.
- Squads of 100 -1000 men known as the 'Corp of Vigiles'.
- Fire centurion, or 'Praefectus Vigilum' was the equivalent of our modern day fire chief.

Quarstinnarius

The forerunner of our modern day Fire Marshal
Roman law dictated that cause and responsibilities of fire be determined.

Due to the penalties under the law, the Quarstinnarius was both feared and respected by the community.

(much like today)

Despite early efforts....

- Rome burned 59 A.D.
- Great London fire occurred 1212
- Moscow burned 1570
- London Fire 1616
- Plymouth Colony destroyed 1623 (New World)
- Jamestown destroyed 1676
- Great Chicago fire occurred 1871
- Iroquois Theater occurred 1903
- Triangle shirtwaist occurred 1911

Fire History of US.
Past - Present

- ***If we fail to remember our history - we are bound to repeat it.***

Name the worst fire (s) in US History.....

... or later efforts!

- Great Chicago 1871 (Fire Prevention Week of October 7th)
- Peshtigo, Wisconsin 1871
- Lakeview School (Collinwood, OH.) 1908
- Coconut Grove 1942
- Beverly Hills, Ky Supper Club 1977
- Bradley Beach, NJ 1980
- Keansburg, NJ 1981
- Great Adventure, Jackson, NJ 1984
- Happy Land, NYC 1987
- Hamlet, NC. 1994
- Seton Hall 2000, NJ and onward.....

Fire History Past & Present

From History, these items were developed or enacted

- ***Fire Exits***
- ***Fire Alarms***
- ***Door Swing Direction***
- ***Emergency Lights***
- ***Locks on Egress doors***
- ***Panic Hardware***
- ***Fire Drills***
- ***Combustible loading***

All effected today's fire safety efforts

- The term 'fire watch' started 300 B.C.
- Some of today's current code requirements for fireplaces and fire walls began due to the great London fire of 1212.
- Bradley Beach/Keansburg/ gave us the Uniform Fire Safety Act in 1983.
- Seton Hall gave us dormitory suppression.

Our fire code is actually a history book.....!

History of Fires in New Jersey

1980

- Bradley Beach, NJ Nursing Home, 23 dead

1981

- Keansburg Nursing Home, 31 dead
- Nursing Home in Camden, 3 dead
- Nursing Home in Pt Pleasant, 7 dead
- Texaco Oil Tank Farm Newark, NJ, 2 killed, Millions of gallons of oil burned.

Governor Byrne Task Force to Study Fire's In NJ

- How many fire's occur in NJ ?
- How many FD's/Co's in NJ ?
- How many deaths ?
- How many injuries ?
- How much is it costing.
- Why did over 70 people die in these fires in shelter care homes.

Source: NJ Fire Safety Study Commission

Then

- Time passes:
- The state legislature, towns, counties and even some of the proponents lost interest.
- Select groups started to question why was state government transgressing local government. *"messaging in my pool"*

May 1984

- Great Adventure

Haunted Mansion Fire

8 teenage children killed in multi-box trailers connected together.

Investigation revealed that the County believed that the state was doing inspections, state believed that County was doing them, locals had a program but could not handle a large facility like Great Adventure.

State Legislation

- In 1984-85 State legislation placed greater emphasis of fire prevention and inspection.
- In response to this, public and private fire protection agencies have required fire service personnel to have greater professional knowledge.
- This course teaches the student the critical elements of successful fire prevention and & code enforcement using the *New Jersey Uniform Fire Code as the base document.*

Intertwined terms throughout
history.....

Fire Hazard

Fire Prevention

Fire Inspector

Fire Protection

Fire Hazard

Any thing or act increasing or causing an increase of the hazard or menace of fire to a greater degree than that customarily recognized by persons in the public service who are regularly engaged in preventing, suppressing or extinguishing a fire; or which may obstruct, delay, hinder or interfere with the operations of the fire department or the egress of occupants in the event of a fire.

Fire Prevention

The preventive measures which provide for the safe conduct and operation of hazardous processes, storage of combustible and flammable materials, conducting of fire drills and the maintenance of fire protection, detection and extinguishing service equipment and good housekeeping conditions.

The term also means and includes that part of fire protection activities exercised in advance of the outbreak of fire to prevent such outbreaks and to minimize loss when fire does occur.

Fire Protection

The provision of construction safeguards and exit facilities and the installation of fire-alarm, fire-detecting and fire-extinguishing service equipment to reduce the fire risk and conflagration hazard.

Fire Inspector

Means a person working under the direction of the fire official who is certified by the Commissioner of the Department of Community Affairs and appointed or designated to enforce the Code by the appointing authority of a local enforcing agency.

Fire Code Official

Fire Official means the person certified by the Commissioner of the Department of Community Affairs and appointed to direct the enforcement of the code by the appointing authority of the local enforcing agency

Connecting the terms

- Fire hazard – the target
- Fire Prevention – preventing and controlling the fire hazard
- Fire Protection – built in construction features to reduce the effects of fire
- Fire Inspector – the person connecting the three items together by recognizing the hazards and applying the “E’s” of fire prevention.

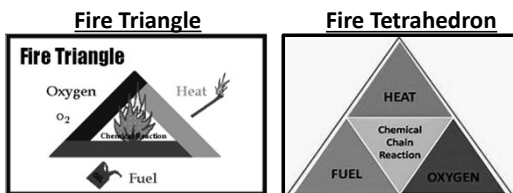
General Terms

- | | |
|----------------------|----------------------|
| • Life Hazard Uses | Non-Life Hazard Uses |
| Fire Safety Permits | Inspections |
| Complaints | Violation Notice(s) |
| Verbal warning | Written Notices |
| Forms | Records |
| Investigations | Fire Reports |
| Suppression | Fire Wall |
| Fire Separation Wall | Ordinance |
| Flash Point temp. | Ignition temperature |
| Flammable | Combustible |
| Fire Official | Fire Inspector |
| UCC | UFC |

General Terms UCC

- Sub-codes
- Use group(s)
- Fire Sub-code Official
- Fire Inspector (UCC)
- Construction Official
- Sub-code Official

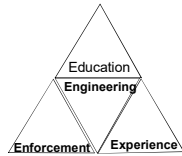
Basic Fire Science



Four (4) E's of Fire Prevention

When it is all said and done - It comes down to the following

- **Education**
- **Enforcement**
- **Experience**
- **Engineering**



This course we will concentrate on Education

Basic Fire Chemistry

Heat Sources

- **Mechanical**
 - Friction
 - Compression
 - **Chemical**
 - Heat of Solution
 - Spontaneous Heating
 - **Nuclear**
 - Fission
 - or Fusion
 - **Electrical**
 - Arcing
 - Resistance Heating
 - Static Electricity
- Dielectric Heating
Radio Frequency(microwave)

Method of heat transfers

Methods of Heat Transfer



Conduction:
Heat transferred
by touching

Convection: Heat
transferred by the
motion of a
substance



Convection



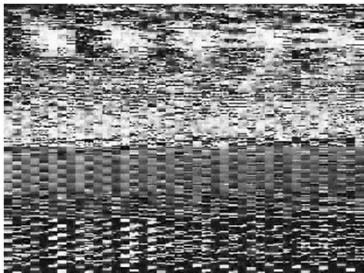
Radiation: Heat
transferred
through as waves
through space


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Fire Prevention
What does it really mean !

- Fire Deaths & Injuries - tangible
- Fire Prevention - non tangible
- A code book can be looked upon with two different perspectives:
 - As a book of Death
 - As a book of Life
- Through effective use we can achieve measurable results.


Station Night Club Fire





Station Night Club Fire

- What Fire Code issues did you see? hat



This class looks difficult

IT IS.



Summary

In this Module we have discussed:

- Course Parameters
- Grading policy
- Code History
- NJ State Legislature
- Uniform Construction Code-NJ
- Basic Fire Science
- Terms
- Testing

Home work assignment

- List on paper and bring to the next class
- 10 Buildings and or structures and or property in you or around your home, fire house, or work.
- **List the name**
- **Address**
- **What they do** (Auto repair body shop, retail sales, business office)
- (use the sheet provided in the student manual)

- END OF Part 1
- Module 1 Part 2 as shown on course guide
